in the left lobe of the liver on its upper surface a pin without head, implanted in the hepatic tissue. The liver of normal size, but had the aspect and yellow color of infectious and cachetic degeneration. As to the patient's mental state, indicated by his self-mutilation, "under what inspiration did he act and what was his object?" No satisfactory replies were obtained from him. "Auto-mutilators most often obey their delusional ideas. Some wish to punish themselves for crimes they believe they have committed, others think to escape from persecutions; sometimes they are simply the result of despair, often the motives are incomprehensible." "In our patient by reason of his delusion, essentially polymorphic and in absence of all indications, the exciting cause is alone known to us, *i.e.*, blunting of sensation." "In that state did T. perhaps obey a voice? Did he wish to deliver himself from some evil spirits within him? Did he wish to punish himself for some faults, of which he believed himself culpable? As to the efficient cause of his mutilation we make any of these suppositions."

Richards (Amityville, L. I.)

NOUVELLE ICONOGRAPHIE DE LA SALPETRIERE.

(15th year, 1902, No. 6. November-December.)

1. On the Affections of the Cauda Equina and of the Inferior Segment of the Spinal Cord. F. Raymond.
2. Syphilitic Lesions of the Nerve Centers. Hemiasynergia, Lateropropulsion and Bulbar Myosis with Hemianesthesia and Crossed Hemiplegia. Babinski and Nageotte.
3. The Historical Lesions of the Cortex in the Atrophies of the Cerebellum. Lannois and Paviot.
4. The Protoplasmic Prolongations of the Nerve Cells of the Horns of the Spinal Cord in the New-Born. Soukhanoff and Czarnieck.
5. Gigantism and Infantilism. Launois and Pierre Roy.
6. The "Paotred ar Zabat" Breton Legends. Ducrest de Villeneuve.
7. Giants in Art. Henry Meige.

(1) *Affections of Cauda Equina.*—This is a further study of the inferior segment of the spinal cord, which has of late been the subject of several communications by Raymond. The cauda equina includes the total number of nerve roots which arise from the lumbar enlargement and from the conus terminalis, and the fibers which go to form the sacral and sacrococcygeal plexus. At the present time the term "affections of the cauda equina" is applied to pathological cases which are distinguished by the partial or total integrity of the sensory motor functions of the inferior extremities which are innervated by the lumbar plexus. To assume that a morbid process affects the total number of roots of the cauda equina, it is necessary to include, among the other symptoms which may be present, a total sensory and motor paralysis of the inferior extremities. The location of the lesion, whether nuclear or radicular, is of great importance. Three cases are quoted to illustrate the diagnostic principles which are to be drawn upon in localizing the lesion.

Case I.—Woman, aged thirty years. Two years before, without any known cause, other than fatigue due to the patient's profession, she became the subject of violent pains extending to the buttocks and thighs. They became more intense on the left than on the right and followed in general the distribution of the sciatic nerve. Difficulty in locomotion soon followed, and bladder incontinence with retention soon developed. Progressive atrophy of the muscles, more marked on the left than on the right, disappearance of tendon reflexes, and an anesthetic area which at first occupied the internal aspect of the buttock on either side, soon made their appearance. The plantar surface of the left foot and the extension of the area of anesthesia to the posterior surface of the leg completed the picture. The seat of the lesion was believed to be in the nerve roots composing the cauda equina and not in the cord segment which gave rise to them, for these reasons: The excentric direction in which the violent pains were propagated, the unequal intensity of the pain on one side as compared to the other, and the bladder disturbances. Raymond believes this to be a neuritis, implicating the nerve roots and produced by the fatigue which the profession of the patient caused. The patient was a mechanic by profession. The prognosis of the neuritic variety is more favorable than that of the nuclear.

Case 2.—A man thirty-eight years old, alcoholic. Paresthesia of the left lower extremity, followed by a motor paresis, developed after exposure to cold; incontinence. Four months afterward the condition was as follows: motor paresis very pronounced of the muscles of the posterior aspect of the thigh; the leg muscles and the left foot. Atrophy and R. D. in the region supplied by the external popliteal branch of the sciatic. Abolition of the tendo Achillis reflex. Intermittent pains along the sciatic region; anesthesia of the left half of the scrotum, penis, perineum, and of the adjacent buttock territory and of the thigh, in the form of a band, the size of which diminishes gradually from top to bottom. The anesthesia extends to the external portion of the dorsal aspect of the foot; abolition of anal reflex, suppression of erection. The diagnosis of a neuritis of the nerve roots of the cauda equina, with a relatively favorable prognosis was made.

Case 3.—Man, age twenty-eight, motor paralysis of the left lower extremity, atrophy of the muscles of the posterior aspect of the thigh and of the calf, with a lowering of the local temperature in these regions. The knee jerk and the Achilles reflex abolished. On account of the acute onset of these symptoms, with temperature, and the sudden paralysis of both extremities, followed by a permanent paresis of the left one, the rapid appearance of atrophy, the coldness of the extremity, the disappearance of both tendon reflexes, led the author to make the diagnosis of hematomyelia, or rather of a hemorrhagic poliomyelitis limited to the anterior column of the spinal cord segment which gives rise to the nerve roots which form the sacrococcygeal plexus.

2. *Syphilitic Lesions of Nerve Centers.*—Babinski and Nageotte presented to the Neurological Society at Paris, April, 1902, a description from a clinical point of view of a disease closely allied to a unilateral bulbar lesion. Three cases formed the basis of this communication. The essential features were hemiplegia, hemianesthesia on the side opposite to the lesion, hemiasynergia, lateropropulsion, and myosis on the same side as the lesion. One of these cases came to autopsy, and this paper is given up to a further study of this disease, especially from the anatomical point of view. A man fifty years old, syphilitically infected at the age of thirty, was attacked suddenly while in perfect health with hemiasynergia limited to the inferior left extremity, lateropropulsion towards the left, slight tremor of the upper extremities, a moderate degree of hemiplegia and anesthesia on the right, difficulty of deglutition and slight narrowing of the left pupil. Twelve days after the attack the patient died and the autopsy showed the presence of arterial syphilitic lesions and diffuse meningitis with multiple foci of softening located in the left half of the medulla. From these clinical and anatomical data, the authors have felt justified in drawing certain deductions relative to the mode of development of syphilitic affections in general and to the relation which exists between the observed symptoms and the localization of the morbid processes as determined by microscopic examination. Some of these deductions are the following: Generalized meningeal lesions appear to be the rule in a nervous syphilis during the process of evolution whatever its form may be, whether tabes, general paralysis, or multiple lesions of the brain and cord. These

lesions constitute in some way the foundations upon which are based the further developing lesions characteristic of every form of syphilis of the nervous system. The lymphocytosis which is found in the cerebrospinal fluid preceding the appearance of the meningeal symptoms, appears very early. It accompanies the first symptom of nervous syphilis and may be its only manifestation. In consequence, a meningitis appears to be the first stage of any lesion of the nervous system which is the seat of a syphilitic infection. Syphilitic meningitis bears a close resemblance to tubercular meningitis from the histological point of view. The differentiation is to be made by the presence of a less discrete cellular infiltration and the absence of true caseation in the former as compared with the latter. The authors, however, confess that the distinction cannot always be made. In the case here described the diffuse arterial lesions have determined the areas of softening in the medulla, upon which the symptoms depend. The lesions caused the following interruptions in the nerve tracts: (1) An interruption of the olive-ciliary pathway of both sides. The cells of the inferior olivary bodies of the medulla are not in connection by means of their axis cylinders with the cells of the cerebellar olive and of the nucleus emboliformis; (2) An interruption of the descending path which connects the nucleus of Deiters on the left (perhaps the left hemisphere of the cerebellum), with the left side of the medulla; (3) An interruption of a portion of the fibers of the fillet; (4) An interruption of the lateral ascending paths of the cord (Gowers' column), with a conservation of the direct cerebellar tract, probably; (5) A lesion of the longitudinal posterior tract, left, with a descending degeneration; (6) Destruction of mixed nerves on the left side over a certain extent; (7) A slight lesion of the left pyramid.

3. *Histology in Atrophy of Cerebellum.*—In 1901 the authors, Lannois and Paviot, made a preliminary communication to the Society of Medical Sciences in Lyons in which they showed that, in certain cases of atrophy of the cerebellum, the cells of Purkinje and the cells of the molecular layer were found absent and a new layer of cells appeared in their place, which had not yet been described by histologists. They decided that these cells were present in the normal cerebellum lying between the molecular and granular layers, above the layer of the cells of Purkinje, and that they could be identified with the large cells described by Cajal, Golgi, Bechterew, and called by Dejerine large cells of type II of Golgi. They have been able to study three additional cases of cerebellar disease which throw light on this subject. They are here reported, together with the results of the anatomical studies. *Case 1.*—Cerebellar syndrome with muscular asynergia of the trunk and extremities. Cerebellar atrophy apparently limited to the base, a subcerebellar pseudo-cyst. Chronic diffuse meningitis. *Case 2.*—Epilepsy. Attacks very frequent, with a sensory aura. No loss of consciousness. Atrophy of the left lobe of the cerebellum. *Case 3.*—Spasmodic infantile atrophy on the right. Epilepsy. Cerebral sclerosis of the left hemisphere, with crossed atrophy of the cerebellum. In these three observations of primary or secondary atrophy of the cerebellum a lesion has been found which, to all appearances, is absolutely characteristic. The lesion appears in the convolutions of the cerebellar cortex. The Purkinje cells disappear absolutely without leaving the least vestige of degenerative cell bodies in the process of destruction. The cells are either normal or are not seen at all. At the same time the granular layer lessens, then disappears, and shows by the Nissl stain no trace of cell structure. Together with the double disappearance of the normal cell layers of the cerebellum, there appears outside of the granular layer, and sharply separated from it, a layer of oval and pale cells which have a nucleus of chromatin and from one to two nucleoli, which are very deeply stained. This new layer does not give the impression of having been newly formed. It seems to

have existed before under the Purkinje cells and those of the granular layer, and it only comes into evidence with the disappearance of the two former. That this layer has not been before recognized is due chiefly to the method of staining used, as in the Weigert-Pal preparations it appears very faintly. Thomas and Dejerine have probably seen them, judging from the description which is found in their well-known work, Le Cervelet, 1897, but they failed to give to them any great importance. The following conclusions end the article: (1) There is no histological difference between the cortex of the cerebellum, which is primarily atrophied and one which is secondarily atrophied; (2) In the process of atrophy there becomes isolated invariably a layer which corresponds probably to the cells which lie between the granular and the molecular layer (cells of Type II, Golgi). The molecular layer atrophies at the same time that the cells of Purkinje and the granular cells disappear. The disappearance of the cells of Purkinje is total and absolute and precedes all other changes in the atrophic process. The frequently occurring secondary nature of the atrophies shows that one should not consider cerebellar syndrome as being always the type of the primary lesion of the cerebellum.

4. *Nerve Cells in Horn or Spinal Cord.*—In a previous communication *Le Nevraxe,* (see Jan., 1903, No., JOURNAL NERVOUS AND MENTAL DISEASE), the authors of this article have demonstrated the possibility of using the chrome-silver method in the study of the adult spinal cord. They made sections in a longitudinal direction parallel to the central canal. In this way they were able to study with great accuracy the protoplasmic prolongations of the nerve cells. The present paper is concerned with the appearance of these prolongations in the cells of the anterior and posterior horns in the cords of newborn infants. Their method is as follows: Small pieces of cord were cut in half in a dorso-ventrical direction and placed in a chrome-osmic mixture for four days. The specimens were then placed for two or three days in a 2 per cent. solution of silver nitrate to which was then added osmic acid. Some of their results were as follows: There exists a very marked difference between the aspect of the protoplasmic prolongations of the cells of the anterior and those of the posterior horns. In the former the dendrites are more regular and come off more at right angles. They are also very poor in collaterals. In the posterior horns the dendrites are short, more ramified, their contour is less regular, and they are richer in collaterals of a varying form.

5. *Gigantism and Infantilism.*—Launois and P. Roy say that gigantism and infantilism are two anomalies of evolution which, at first sight, appear to be so different that any attempt to bring them into the same category would seem impossible. A relation between them was suggested by the study of some cases scattered in the literature and by the observation of a case upon which this article is based. The case here reported is that of a man of large stature, measuring in height two meters and four mm. Various stigmata of infantilism can be demonstrated. The man continues to grow, although he has reached the age of thirty years. A careful description is given, together with measurements, photographs, and radiographs. Other cases are cited, and from the data thus obtained these conclusions are reached: (1) There exists a type of infantile gigantism in which large stature coexists with genital atrophy, or at least with impotency and sterility, facts which have been noted among giants; (2) This type of infantile gigantism, especially in regard to the continuity of growth (persistence of cartilaginous union), to the manner of this growth (increase in length of extremities and especially of the inferior extremities), and in regard to its anomalies (genu valgum), is not always perhaps to be considered as belonging to the type of acromegalic gigantism (large body, hypertrophy of the extremities, deformity of the inferior maxilla, *etc.*), because the retardation in the ossification of the epiphyseal cartilages

and the hypertrophy of the hypophysis are common to both; (3) It remains to be determined the part that the pituitary hypertrophy plays in this production of abnormal growth. In this regard the examination of the hypophysis in eunuchs and in animals which have been castrated early in life, can perhaps furnish us with the desired information.

6 and 7.—Articles of literary interest solely.

Sidney I. Schwab (St. Louis).

MISCELLANY.

Treatment of Graves' Disease. E. Schultes (Münch med. Woch., May 20, 1902.)

The author has made a series of investigations on the action of a serum obtained from sheep or dogs from which the thyroids have been removed, following the initial suggestion of Baller and Enriquez. He reports the case of a woman forty-nine years of age who had had exophthalmic goiter four years. Palpitation, anxiety and delirium were prominent symptoms. The exophthalmos was marked, the thyroid much enlarged, circumference of neck being 17 inches. The initial dosage of this new body, prepared by Merck and termed antithyroidin, was gm. 0.5 (7.5 grs.). This was increased until she was taking gm. 4.5 (70 grs.) three times a day. After two weeks her delirium was markedly improved, the pulse rate has dropped to 100, the circumference of the neck diminished almost an inch. A week later the pulse rate was 88. The thyroid was softer and the patient was able to attend to light work, such as sewing from which she had been deprived by reason of the marked tremor. After seven weeks she was sufficiently better to be termed well.

Neurasthenia. Joseph M. Aiken (Medical News, Nov. 29, 1902.)

Neurasthenia is a primary affection of the nervous system, especially common in individuals with hereditary defects. The unstable constitution is a neurasthenic in latency, needing only some shock, moral or physical to develop neurasthenic symptoms. Diminished dynamic energy, and lessened recuperative power in nervous structures is the chief pathological condition. Impaired metabolism with accumulation of waste products, which in turn accumulating in the blood, give rise to auto-intoxication, especially affecting the nervous system. Deficiency, never loss of function and fatigue, are common symptoms, but no loss of sensation. Headache is never absent, or pains in the back or limbs. Diminished sexual, visual or digestive power are common. Mentally, weakness or irritability are common.

Treatment should be hygienic, dietetic and medicinal; with special stress on strange environment, careful hydrotherapy, sleep, exercise and diet strictly regulated by the physician. Hypnotism still farther exhausts weakened nerve power. Water should be given freely, except at meal times, often hot.

W. B. Noyes.

Symmetrical Gangrene (Raynaud's) *versus* Endarteritis Obliterans James Dudley Morgan. (The Journal of the American Medical Association, Nov. 29, 1902.)

The smaller blood vessels seem to be affected first in Raynaud's disease. They have more muscular tissue in their middle coats, and are thus more capable of active changes in caliber, and this muscular tissue is under control of sympathetic nerves, which nerves are controlled by sympathetic nerves, which nerves are controlled through their center in the spinal cord. Friedländer's disease, or obliterating endarteritis, generally shows neuritis. Raynaud's gangrene may occur without neuritis. There is an abnormal excitability of the vasomotor centers in the spinal cord, producing a spasm of the vessels. True Raynaud's disease is rare. It should not include cases with proliferation of cells of the intima. Both diseases